ABSTRACT OF THE DISCLOSURE

A needle aspiration biopsy device includes a syringe, a valve coupler for controlling a vacuum in the syringe barrel, and an anti-reflux head. The head includes a hub, defining a large collection well preferably several hundred micro liters in volume, and a needle mounted to the hub. A passageway is defined either by a contoured needle or a straight needle and an internal channel in the hub wall such that a proximal end of the passageway extends inside the hub and opens in spaced relation to a floor of the collection well. A method of biopsy using the device is also disclosed.